



State of New Jersey

CHRISTINE TODD WHITMAN
Governor

DEPARTMENT OF LABOR
CN 386
TRENTON, NEW JERSEY 08625-0386

MEL GELADE
Commissioner

PUBLIC EMPLOYER SAFETY ALERT # 5

NEW STANDARD - INDOOR AIR QUALITY

ATTENTION: ALL PUBLIC EMPLOYERS

APRIL 1997

The New Jersey Department of Labor wants to inform all Public Employers that the newly adopted Indoor Air Quality Standard (NJAC 12:100-13) was published in the New Jersey Register on Monday, March 3, 1997.

At this time there are no Federal Standards or requirements concerning indoor air quality. As a result, these rules do not exceed standards or requirements imposed by Federal law.

We have provided you with the attached copy of the new standard for your records and reference.

For additional copies please call: (609) 292-7036

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AD-18.30A (2-97)



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SUBCHAPTER 13.

INDOOR AIR QUALITY STANDARD

12:100-13.2 Scope

This subchapter shall apply to matters relating to indoor air quality in existing buildings occupied by public employees during their regular working hours.

12:100-13.2 Definitions

The following words and terms, when used in this subchapter, have the following meaning unless the context clearly indicates otherwise.

"Air contaminants" refers to substances contained in the vapors from paint, cleaning chemicals, pesticides, solvents, particulates, outdoor air pollutants and other airborne substances which together may cause material impairment to employees working within the enclosed workplace.

"Building-related illnesses" describes specific medical conditions of known etiology which can be documented by physical signs and laboratory findings. Such illnesses include sensory irritations when caused by known agents, respiratory allergies, asthma, nosocomial infections, humidifier fever, Legionnaires' disease, and the signs and symptoms characteristics of exposure to chemical or biologic substances such as carbon monoxide, formaldehyde, pesticides, endotoxins, or mycotoxins.

"Building systems" includes the heating, ventilation and air-conditioning (HVAC) system, the energy management system and all other systems in a facility which may impact indoor air quality.

"Department" means the Department of Health and Senior Services.

"Designated person" means a person who has been given the responsibility by the employer to take necessary measures to assure compliance with this subchapter.



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"Designated smoking area" means an area in a building, where smoking is permitted and which is physically separated from non-smoking areas and which non-smokers are not required to enter or pass through.

"Employee" means the term as defined at N.J.A.C. 12:100-2.1.

"Employer" means the term as defined at N.J.A.C. 12:100-2.1.

"HVAC system" means the collective components of the heating, ventilation and air-conditioning system including, but not limited to, filters and frames, cooling coil condensate drip pans and drainage piping, outside air dampers and actuators, humidifiers, air distribution ductwork, automatic temperature controls, and cooling towers.

"HVAC System Commissioning Report" means a document normally prepared by an architect or engineer that provides verification that the HVAC system is operating in conformity with the design intent."

"Office building" means a building in which administrative and/or clerical activities are conducted. Examples of facilities and/or operations which are not office buildings include schools, repair shops, garages and print shops.

"Renovation and remodeling" means building modification involving activities that include but are not limited to: removal or replacement of walls, roofing, ceilings, floors, carpet, and components such as moldings, cabinets, doors, and windows; paintings; decorating; demolition; surface refinishing; and removal or cleaning of ventilation ducts.

12:100-13.3 Compliance program

(a) The employer shall identify a designated person who is given the responsibility to assure compliance with this section. The designated person shall assure that at least the following actions are implemented and documented;

1. Establishing and following a preventive maintenance schedule in accordance with the manufacturer's recommendations or with accepted practice for the HVAC system. scheduled maintenance of the HVAC system shall include checking and/or changing air filters, checking and/or changing belts, lubrication of equipment parts, checking the functioning of motors and confirming that all equipment is in operating order. Damaged or inoperable components shall be replaced or repaired as appropriate. Additionally, any reservoirs or parts of this system with standing water shall be checked visually for microbial growth;

2. Implementing the use of general or local exhaust ventilation where housekeeping and maintenance activities involve use of equipment or products that could reasonably be

expected to result in hazardous chemical or particulate exposures above the applicable Permissible Exposure Limit (PEL), as adopted by reference under N.J.A.C. 12:100-4.2, to employees working in other areas of the building or facility;

3. When the carbon dioxide level exceeds 1,000 parts per million (ppm), the employer shall check to make sure the HVAC system is operating as it should. If it is not, the employer shall take necessary steps as outlined in (a) 1 above:

4. When temperatures in office buildings are outside of the range of 68 to 79 degrees Fahrenheit, the employer shall check to make sure the HVAC system is in proper operating order. If it is not, the employer shall take necessary steps as outlined in (a) 1 above:

5. If contamination of the make-up air supply is identified and documented, then the make-up inlets and/or exhaust air outlets shall be relocated or the source of the contamination eliminated. Sources of make-up air contamination may include contaminants from sources such as cooling towers, sanitary vents, vehicular exhausts from parking garages loading docks, and street traffic;

6. Assuring that buildings without mechanical ventilation are maintained so that windows, doors, vent. stacks and other portals designed or used for natural ventilation are in operable condition; and

7. Promptly investigating all employee complaints of signs or symptoms that may be associated with building-related illness.

12:100-13.4 Control of specific contaminant sources

(a) In workplaces where the employer has established designated smoking areas, the following shall apply:

1. Smoking shall be permitted only in such areas:

2. The employer shall assure that designated smoking areas are enclosed, exhausted directly to the outside, and are maintained under negative pressure (with respect to surrounding spaces) sufficient to contain tobacco smoke within the designated area:

3. The employer shall assure that cleaning and maintenance work in designated smoking areas is conducted only when no smoking is taking place;

4. The employer shall assure that employees are not required to enter designated smoking areas in the performance of normal work activities;

5. The employer shall post signs clearly indicating areas that are designated smoking areas;

6. The employer shall post signs that will clearly inform anyone entering the workplace that smoking is restricted to designated areas; and

7. The employer shall prohibit smoking within designated smoking areas during any period that the exhaust ventilation system servicing that area is not properly operating.

(b) Regarding other indoor air contaminants, when general ventilation is inadequate to control air contaminations emitted from point sources within work spaces to below the applicable PEL, as adopted by reference under N.J.A.C. 12:100-4.2, the employer shall implement other control measures such as local source capture exhaust ventilation or substitution.

(c) The employer shall control microbial contamination in the building by promptly repairing water leaks that can promote growth of biologic agents, or shall control microbial contamination in the building by promptly drying, replacing, removing, or cleaning damp or wet materials. The employer shall take measures to remove visible microbial contaminants in ductwork, humidifiers, other HVAC and building system components, or on building surfaces, such as carpeting and ceiling tiles, when found during regular or emergency maintenance activities or during visual inspection.

12:100-13.5 Air quality during renovation and remodeling

(a) Renovation work and/or new construction that results in the diffusion of dust, stone and other small particles, toxic gases or other harmful substances in quantities hazardous to health shall be safeguarded by means of local ventilation or other protective devices to ensure the safety of employees. Renovation areas in occupied buildings shall be isolated and dust and debris shall be confined to the renovation or construction area.

(b) Before use of paints, adhesives, sealants, solvents, or installation of insulation, particle board, plywood, floor coverings, carpet backing, textiles, or other materials in the course of renovation or construction, the employer shall check product labels or seek and obtain information from the manufacturers of those products on whether or not they contain volatile organic compounds such as solvents, formaldehyde or isocyanates that could be emitted during regular use. This information shall be used to select products and to determine necessary measures to be taken to comply with this section.

(c) The employer shall notify employees at least 24 hours in advance, or promptly in emergency situations, of work to be performed on the building that may introduce air contaminants into their work area.

12:100-13.6 Recordkeeping

(a) The maintenance schedule shall be updated to show all maintenance performed on the building systems. The schedule shall include the date that such maintenance was performed and the name of the person or company performing the work.

(b) The records required to be maintained by this section shall be retained for at least three years and be available on request to employees and employee representatives and Department representatives for examination and copying.

12:100-13.7 Employer's response to a signed complaint

(a) Within 15 working days of receipt of the complaint notification from the Department, the employer shall respond in writing to the Department. The response may include any combination of the following:

1. A statement that the complaint is unfounded;
2. A description of any remedial action already taken;
3. An outline of any remedial measures planned but not yet taken with a timetable for completion; and/or
4. A statement that a study of the problem, with a timetable for completion of the study, has been initiated.

(b) Where remedial measures are planned or a study initiated, they shall be completed as soon as feasible. The employer shall submit, to the Department, a written report describing the remedial measures implemented and/or a copy of a study's report within 15 working days of completion.

(c) Permits for remedial work shall be obtained as required by N.J.A.C. 5:23 (the New Jersey Uniform Construction Code). All work requiring a permit shall be performed in compliance with N.J.A.C. 5:23.

12:100-13.8 Indoor air quality (IAQ) compliance documents

(a) In response to an employee complaint to the Department, the employer shall provide any of the following documents, if available, and requested by the Department:

1. As-built construction documents;
2. HVAC system commissioning reports;
3. HVAC systems testing, adjusting and balancing reports;
4. Operations and maintenance manuals;
5. Water treatment logs; and
6. Operator training materials.